

COLLAPSIBLE LAUNDRY RACK

Field

5 The invention relates generally to connectors for connecting components of laundry and storage devices, and particularly to connectors for connecting components of a collapsible laundry rack.

Background

10 Laundry racks or drying racks typically consist of a pair of legs connected by cross supports. The legs are formed of a plurality of members in a scissor-type linkage arrangement, allowing the legs, and thus the racks, to be converted from a collapsed position to an
15 expanded position. In the collapsed position, the racks can be smaller in size than the expanded position and more readily stored. In the expanded position, the racks can be used to hang various articles, such as clothes, over the legs and cross supports.

20 In one form of racks or stands, the cross supports are permanently secured to the legs. While advantageously eliminating assembly operations by the consumer, such racks, even in their collapsed configurations, can be bulky. When shipping racks from
25 overseas, shipping costs can be higher for bulky, space consuming racks in their collapsed states as compared to the disassembled components of the racks. The bulkiness of collapsed racks having the legs permanently connected to the cross supports can also disadvantageously require
30 an increased amount of shelf space in stores as compared to the various components of the rack disassembled.

To reduce the bulkiness of the racks during shipping and when placed on a shelf in stores, the legs and cross supports of the racks have been provided disassembled.
35 However, assembly of these racks can be difficult,

requiring complex manipulations of the components and sometimes tools to permit assembly by the consumer or end user. For example, holes have been provided in the legs for receiving ends of the cross supports. The cross
5 supports can each be inserted into the holes in a first of the pair of legs, then inserted into the holes in the second of the pair of legs. Due to the number of cross supports, typically three or more, insertion of the cross supports into the holes in the second of the pair of legs
10 can be difficult, requiring that each of the holes simultaneously be aligned with the ends of the cross supports before any of the cross supports are inserted into the holes.

Once in the holes, a friction or interference fit
15 can be used to maintain the cross members in engagement with the legs. However, the friction fits between each of the holes and cross supports can vary, potentially causing difficulties in assembly or in maintaining the components assembled. Screws or other fasteners can be
20 used to maintain the components in an assembled state, but disadvantageously require additional assembly steps and sometimes the use of tools by the consumer or end user.

Laundry racks or stands are disclosed in U.S. Patent
25 Nos. 6,394,292 and 6,427,858 that are formed of a pair of legs having cross supports extending therebetween. However, complex connection mechanisms are required to secure the cross supports between the legs. These complex connection mechanisms can require complicated or
30 multiple assembly steps by a consumer or end user, and can in some instances be formed of multiple parts that must be assembled. In addition, the configuration of these connection mechanisms appears to require simultaneous alignment and assembly of the cross supports
35 to one of the pair of legs.

Another problem with typical collapsible laundry racks is inadvertent shifting of the rack from an expanded configuration to a collapsed configuration. Such inadvertent shifting can be problematic,
5 particularly when clothes or other articles are hanging are the cross supports and can become dislodge. Moreover, the weight of the articles, such as wet or damp close, can increase the likelihood of inadvertent shifting of the rack from the expanded configuration to
10 the collapsed configuration. In order to reduce the likelihood of the racks from inadvertent shifting, support members are provided to assist in keeping each leg in its expanded position. However, inadvertent shifting of the racks from the expanded configuration to
15 the collapsed configuration can still occur.

Summary

A method and apparatus are provided for an improved laundry rack that allows for simplified assembly and
20 disassembly. The laundry rack is convertible between an expanded position for use as a drying rack or stand and a collapsed position for storage. The laundry rack generally includes a pair of legs having cross members extending therebetween. Each of the legs generally
25 comprises one or more scissor-type linkages that are pivotable between an expanded position and a collapsed position, corresponding to the expanded and collapsed positions of the rack. The cross members are connected to the legs with connectors. The connectors are
30 configured to allow for simplified assembly of the cross members to the legs by allowing for the spacing between the legs to be maintained during connection of the cross members after a first cross member has been connected. The connectors also are configured to provide for
35 simplified assembly and disassembly of the rack by

allowing the cross members to be connected and disconnected relative to the legs in a sequential, as opposed to simultaneous, manner. In addition, the components of the rack are provided in a disassembled state such that minimal assembly steps are required to be performed by a consumer or end user. Thus, the configuration of the connectors allows for the components to be packaged in a compact, yet easy to assembly arrangement, such that shipping costs are minimized, minimal shelf space is occupied in stores, and assembly by the end user is simplified.

In one aspect, the collapsible laundry rack comprises a pair of legs spaced a predetermined distance apart. Each of the legs comprises a plurality of linkage members configured in a scissor linkage arrangement. A plurality of connector sockets are attached to each of the pair of collapsible legs. The connector sockets on one of the pair of collapsible legs are aligned with the connector sockets on the other of the pair of collapsible legs. A plurality of cross members extend between the pair of collapsible legs. Each of the cross members has a connector tab secured to ends thereof. The connector tabs are selectively insertable into the aligned connector sockets on the collapsible legs while the legs are spaced the predetermined distance apart to secure and unsecure the cross members relative to the collapsible legs. The connectors of the laundry rack may be configured such that at least one of the cross members can be selectively inserted and/or removed from between the pair of legs without disengaging another of the cross members maintaining the predetermined distance between the pair of legs.

The connector socket may be generally U-shaped, having a pocket configured for receiving the connector tab. The pocket may be defined by a pair of opposing end

walls and at least one side wall connecting the first and second end walls. One of the end walls may be secured to one of the pair of the collapsible legs. The other of the end walls may be positioned to face the opposing leg of the pair of collapsible legs, and may have a first opening formed therein. The first opening may be sized larger than a cross section of the cross member to allow the cross member to pass therethrough and smaller than a cross section of the connector tab to prevent the connector tab from passing therethrough. Thus, the end wall facing the opposite leg at least partially restrains the connector tab between the pair of opposing end walls and in the pocket, reducing inadvertent removal of the connector tab from the pocket of the connector socket. The side wall may define the second opening, which may be sized to allow for the connector tab to be inserted therethrough and positioned between the opposing end walls.

The plurality of members configured in a scissor linkage arrangement of the legs may further comprise at least a pair of members pivotally connected between ends thereof by a pin. The pair of members may be connected by the pin proximate their midsections. Adjacent members of adjacent linkages may also be connected by pins. The pins may also be used to secure the connector sockets to the legs.

The rack may include at least one scissor-type linkage forming at least part of each of the legs. Each of the linkages may have a pair of members being pivotally connected between their ends to convert the laundry rack between an expanded position and a collapsed position. The linkages may be in a generally X-type configuration when in their expanded position, where the members of the linkage are in a generally perpendicular orientation. The linkages may have their members

generally parallel when in the collapsed position, thereby reducing the amount of space occupied by the legs and thus the rack.

One of the cross members may extend between ends of one of the linkage members of each of the linkages of the legs. A support arm may be pivotally attached to an end of the members of at least one of the linkages. The linkage member having a support arm attached may be different than a linkage member having the cross member attached. The support arm is pivotable between a configuration allowing the linkage to shift to the collapsed position and a configuration maintaining the linkage in the expanded position by engagement between an end of the support arm opposite the pivot and the cross member to maintain a predetermined spacing between the pair of linkage members forming the linkage.

A clasp may be provided and pivotally connected to an end of the support arm opposite the end pivotally connected to the leg. The clasp may be pivotable between a locking position securing the support arm to the cross member for securing the leg linkage, and thus the rack, in the expanded position.

In another aspect, a collapsible laundry rack convertible between an expanded position and a collapsed position is provided. The laundry rack includes a pair of collapsible legs, each having a plurality of members configured in a scissor linkage arrangement. A plurality of connector sockets are attached to each of the pair of collapsible legs, and connector sockets on one of the legs may be aligned with a corresponding connector socket on the other of the legs. Each connector socket has a first opening facing the opposing connector socket on the other of the pair of legs and a second opening. The connector sockets on one of the pair of collapsible legs are aligned with the connector sockets on the other of

the pair of collapsible legs. A plurality of cross members extend between the pair of collapsible legs. Each of the cross members has a pair of connector tabs at opposite ends thereof. Each of the connector tabs is
5 insertable into the aligned connector sockets on the collapsible legs through the second openings of the sockets to position the cross member through the first openings of the sockets to selectively secure the cross members to the collapsible legs.

10 At least one of the cross members has the connection tabs selectively removable and insertable from the connection sockets between the pair of legs without disengaging the connection tabs of another of the cross members from the connection sockets between the pair of
15 legs, thereby permitting sequential connection of each of the cross members to the pair of legs independent of the other cross members.

In another aspect, the collapsible laundry rack is convertible between an expanded position and a collapsed
20 position, and a support arm is provided to maintain the laundry rack in the expanded position. The laundry rack comprises a pair of collapsible legs. Each of the legs comprises a plurality of members configured in a scissor linkage arrangement. Each of the pair of legs may have a
25 first and second upper members each having upper ends spaced a distance apart. A plurality of cross members are provided that extend between a pair of collapsible legs. One of the cross members extends between the upper ends of the first of the upper members. A support arm is
30 pivotally attached at one end to the upper end of one of the second upper members. The support arm is pivotable between a configuration allowing the pair of collapsible legs to shift to the collapsed position and a configuration maintaining the pair of collapsible legs in
35 the expanded position. A clasp is connected to an end of

a support arm opposite the end pivotally connected to the second upper member. The clasp is pivotable between a locking position at least partially around one of the cross members when the support arm is in a configuration
5 securing the pair of collapsible legs in the expanded configuration to secure the support arm relative to the one of the cross members.

The end of a support arm having the clasp pivotally attached may have a notched formed therein for at least
10 partially receiving one of the cross members extending between the upper ends of the first upper members. The notch may generally be U-shaped, and may generally be inclined at an angle. The clasp may be generally C-shaped and may be configured to retain the one of the
15 cross members in the notch when in the locking position.

A method of assembling a collapsible laundry rack from a set of components is also provided. The components may comprise a pair of collapsible legs each having a plurality of members configured in a scissor
20 linkage arrangement, a plurality of connector sockets attached to each of the pair of collapsible legs, the sockets one of the pair of collapsible legs being aligned with the connector sockets on the other of the pair of collapsible legs, a plurality of cross members, and
25 connector tabs positioned on each of the ends of the cross members and removably insertable into the aligned connector sockets on the collapsible legs to selectively secure the cross members to the collapsible legs. The method may include spacing the pair of collapsible legs a
30 predetermined distance apart by inserting the tabs of a first one of the plurality of cross members into a pair of aligned connector sockets attached to the pair of collapsible legs. The method may further include the step of inserting the tabs of at least a second one of
35 the plurality of cross members into a pair of aligned

connector sockets attached to the pair of collapsible legs while the collapsible legs are spaced the predetermined distance apart by the first one of the plurality of cross members. The components may be provided such that the only assembly steps that may be required of a consumer or other end user is connecting each of the cross members to the legs using connections that are already provided on the cross members and/or the legs.

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Brief Description of the Drawings

FIGURE 1 is a perspective view a laundry rack in accordance with an embodiment thereof, showing the laundry rack in an expanded position;

15 FIGURE 2 is an elevation view of a leg of the laundry rack of FIGURE 1, showing the leg in an expanded position;

FIGURE 3 is a perspective view of the laundry rack of FIGURE 1, showing the laundry rack in a collapsed position;

20 FIGURE 4 is an elevation view of a connector socket on one of the legs of the laundry rack of FIGURE 1;

FIGURE 5 is a plan view of the connector socket of FIGURE 4;

25 FIGURE 6 is a perspective view of a top rack of the laundry rack of FIGURE 1, showing the top rack in an unsecured position;

FIGURE 7 is a perspective view of the top rack of the laundry rack of FIGURE 1, showing the top rack in a secured position;

30 FIGURE 8 is a perspective view showing a support arm of the top rack of the laundry rack of FIGURE 1, showing the support arm unsecured relative to a cross member;

FIGURE 9 is a perspective view showing the support arm of the top rack of the laundry rack of FIGURE 1,

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showing the support arm secured relative to the cross member; and

FIGURE 10 is a plan view of components of the laundry rack of FIGURE 1 in a disassembled configuration.

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Detailed Description of the Drawings

The laundry rack 5 is preferably embodied in a collapsible rack 5 having a pair of legs 10 connected by cross members 20. The connections between the cross members 20 and legs 10 are configured for simplified assembly and disassembly. Preferred embodiments of the laundry rack 5, wherein connections are provided between the cross members 20 and the legs 10 to permit simplified assembly and disassembly, are disclosed below. FIGURES 15 1-10 illustrate a laundry rack 5 having connections between cross members 20 and legs 10 that promote simplified assembly and disassembly of the components. These components include a pair of legs 10 connected by cross members 20, as shown in FIGURE 1. In the 20 illustrated embodiment, the legs 10 are vertically extending and the cross members 20 are horizontally extending between the legs 10.

The drying rack 5 is shiftable between a collapsed position, as shown in FIGURE 3, and an expanded or 25 upright position as shown in FIGURE 1. The collapsed position allows for simplified storage of the drying rack 5, as it can take up less space than the expanded configuration. The expanded configuration, however, is configured to allow for articles, such as clothes, to be 30 hung from the cross members 20 of the rack 5 for drying or other purposes. The cross members 20 are provided at varying heights along the legs 10 in order to provide multiple positions for articles to be supported. For example, the drying rack 5 illustrated in FIGURE 1 has 35 six different elevations of cross members 20 that allow

for articles of clothing to be hung therefrom.

Each of the legs 10 is convertible between a collapsed position and an extended position, the later of which is shown in FIGURE 2. When the laundry rack 5 is in the collapsed position, each of the legs 10 is also in the collapsed position. Similarly, when each of the legs 10 is in the expanded position, the laundry rack 5 is in its expanded position. The laundry rack 5 includes a top rack portion 30 that is pivotable relative to the legs 10. The top rack portion 30 can be pivoted into a generally horizontal configuration, as shown in FIGURE 7, whereby support arms 32 can secure the laundry rack 5 in its expanded position, as will be described in greater detail hereinbelow. When the top rack 30 is pivoted away from its horizontal position, as shown in FIGURE 6, the laundry rack 5 is able to shift to its collapsed position from its expanded position.

Each of the legs 10 is formed from a plurality of linkages 12, as shown in FIGURE 2. Each of the linkages 12, in turn, is formed from a pair of linkage members 14. Each of the linkage members 14 is attached approximate its midpoint to another of the linkage members 14 forming the linkages 12 about a central pivot pin 16. When the linkages 12 are assembled, each has an inner linkage member 14 facing the opposing leg 10 and an outer linkage member 14 facing away from the opposing leg 10.

In the expanded position of the laundry rack 5, the linkage members 14 of a linkage 12 are in an essentially perpendicular orientation, forming a generally X-type configuration, as shown in FIGURE 2. When the linkages 12 are in their collapsed configuration corresponding to the collapsed configuration of the laundry rack 5, the linkage members 14 of each linkage 12 are pivoted about the central pivot pin 16 of their midsections into a generally parallel configuration, as shown in FIGURE 10.

Ends of the linkages 14 are pivotably connected via pivot pins 18 to ends of adjacent linkages 12. More particularly, the ends of a pair of linkage members 14 forming a linkage 12 may be pivotably connected via the linkage pivot pins 18 to ends of linkage members 14 of an adjacent linkage 12. Multiple linkages 12 may then be connected to each other. When the laundry rack 5 is in its expanded state, the adjacent linkages 12 and more particularly the adjacent linkage members 14 of each linkage 12 are in a generally perpendicular relationship about the pivot pins 18. However, when shifted to the collapsed position, the linkage members 14 of adjacent linkages 12 are shifted about their pivot pins 18 to a generally parallel relationship. The assembly of each linkage 12 provides for a scissor-type linkage arrangement. As shown in FIGURE 2, three linkages 12 form each leg 10, where each linkage 12 has two linkage members 14. However, other numbers of linkages 12 may also be used in accordance with the laundry rack 5.

Connectors 40 are provided on each of the legs 10 and aligned with connectors 40 on opposing legs 10 in order to allow for connection of cross members 20 between the legs 10 to form the drying rack 5. The connection between the cross members 20 and the legs 10 comprises a two-part connector. The first part of the connector is a connection socket 40 that is attachable to the legs 10. The second part of the connectors is a connection tab 50 that is provided on each end of each of the cross members 20. The connectors are configured such that the cross members 20 can be selectively inserted into and removed from engagement with the legs 10 while the legs 10 are maintained at a predetermined distance apart. For example, when assembling the laundry rack 5, one of the cross members 20 can be connected to each of the legs 10 of the rack 5 to thereby maintain each leg 10 of the

drying rack 5 a predetermined distance apart from the other leg. Subsequent cross members 20 can be inserted between the legs 10 and engaged via the connectors without changing the predetermined distance spacing the legs 10 apart. Such an assembly method advantageously allows for the cross members 20 to be connected to each of the legs 10 in a sequential manner. That is, a first of the cross members 20 can be positioned between the first and second legs 10. Then, subsequent cross members 20 can be positioned between the legs 10.

The connector socket 40 that is attached to the legs 10 of the laundry rack 5 has two openings 47 and 48. A first opening 48 allows for insertion of the connector tabs 50 attached to the ends of the cross members 20. The second opening 47 of the connector socket allows for the cross member 20 to extend from within the connector socket 40 when the connector tab 50 is inserted through the first opening 48 thereof. The first opening 48 of the connector socket 40 is positioned to allow for insertion of the connector tab 50 of the cross member 20 without changing the predetermined spacing between the legs 10 of the laundry rack 5.

Turning to more of the details of the connector socket 40, the connector socket 40 is generally U-shaped, as shown in FIGURE 4. The connector socket 40 has a pocket, as shown in FIGURE 5, for receiving the connector tab 50 through the first opening 48. The pocket is defined by a pair of end walls 42 and 44 spaced apart by a side wall 46. One of the end walls 42 is positioned adjacent the support arm 32 or leg 10. The other of the end walls 44 faces the opposing connector socket 40 on the opposite leg 10. The other of the walls 44, facing the opposite leg, has the second opening 47 formed therein. The second opening 47 is configured to be larger than the cross section of the cross member 20 to

allow the cross member 20 to be inserted therethrough. The second opening 47, however, is also sized to be smaller than a cross section of the connector tab 50 in order to prevent the connector tab 50 from passing therethrough. In this manner, the connector tab 50 is held in the pocket of the connector socket 40 by the end wall 44 facing the opposing leg 10. The first opening 48 of the connector socket 40 is sized to allow for the connector tab 50 to pass therethrough to allow for insertion and removal of the connector tab 50 and thus the cross member 20. A depression 41 may be formed in the end wall 42 adjacent the leg 10 or support arm 32 in order to provide clearance between the connector tab 50 when inserted in the pocket and a pin or pivot 60 securing the connector socket 40 relative to the leg 10. While each of the pins 60 secures the connection socket 50 relative to the support arm 32 or linkage member 14, some of the pins 60, when also extending between linkage members 14 of a linkage 12, may comprise pins 16 and 18. By using some of the pivot pins 16 and 18 to secure the connection sockets 40 to the legs and/or support arms 32, the number of separate pieces required to form the rack 5 can be reduced.

As discussed above, the support arms 32 of the top rack portion 30 of the rack 5 may be pivoted between a position preventing the rack 5 from collapsing and a position allowing the rack 5 to collapse. Each of the support arms 32 is pivotably attached at one end to an upper end of a linkage element 14 of an uppermost linkage 12 of the leg 10, as shown in FIGURE 6. The other end of the support arm 32 has a notch 34 configured to at least partially be placed around a cross member 22 extending between another linkage member 14 of the uppermost linkage 12 of the leg 10. When the notch 34 of the support arm 32 is placed over the cross member 22, the

linkage elements 14 of the uppermost linkage 12 are prevented from collapsing, and thus the rack 5 is maintained in its expanded configuration.

To prevent inadvertent removal of the support arm 32 from the cross member 22, a clasp 36 can be secured around the cross member 22. The clasp 36 is pivotably connected to the support arm 32 via a pivot pin or screw 38. If a screw is used, it can be tightened to maintain the clasp 36 in a predetermined orientation. The clasp 36 can be rotated from an open position, shown in FIGURE 8, to a closed position, shown in FIGURE 9. In the open position, the cross member 22 can be inserted into the notch 34 of the support arm 32. In the closed position, a C-shaped portion 37 of the clasp 36 can surround a portion of the cross member 22 not surrounded by the notch 34, thereby securing the cross member 22 between the notch 34 and the clasp 36 to prevent inadvertent removal of the cross member 22 from within the notch 34 and collapsing of the rack 5.

While the openings 48 of the connection sockets 40 can generally be positioned in any direction, it is preferably that most are positioned such that a downward force, such as due to the weight of an article, on the cross member 22 secured via the connection tab 50 will not cause the connection tab 50 to dislodge from the pocket of the socket 40. However, the ones of the connection sockets 50 attached to the uppermost linkages 12 and on the linkage members 14 opposite the linkage members 14 having the support arms 32 connected thereto preferably have openings 48 facing in a generally downward direction. When the rack 5 is heavily weighted with articles, the ends of the uppermost linkage members 14 on each leg 10 tend to want to shift toward their collapsed configurations. Having the openings 48 facing in an opposite direction can prevent the connection tab

50 of cross member 22 from inadvertently becoming dislodged from the pocket of the socket 50. To assist in retaining the uppermost linkages 12 in their expanded positions, and the cross member 22 in the notches 34 of the support arms 32, the notches 34 may be inclined in a direction such that the linkage forces toward the collapsed configuration of the linkages 12 urges the cross member 22 at an angle into the notch 34.

The tab 50 may comprise a circular disc, as shown in Figure 10, that is attached on each end of the cross member 20. In a preferred embodiment, the tab 50 comprises a circular disc having a stem. The stem is insertable into a hollow end of the cross member 20. The cross member 20 can be crimped around the stem of the connector tab 50 in order to secure the connector tab 50 relative to the cross member 20. The disc on the end of the connection tab 50 is preferably sized larger than the cross section of the cross member 20, while the stem is preferably sized smaller than the interior diameter of the cross member 20. In this manner, the stem can readily be inserted into the cross member 20 and the cross member 20 secured to the stem while the disc remains external to the cross member 20 and positioned for engagement within the pocket of the connector socket 40.

The components of the laundry rack or stand 5 may be provided in a disassembled configuration suitable for packaging in a state having a reduced size as compared to the rack in its collapsed state. Such a state advantageously can reduce shipping costs by minimizing the volume occupied by the components as compared to the volume occupied by the rack in its collapsed state. Similarly, such a state can also advantageously reduce the amount of shelf space in a store occupied by the

rack. The disassembled configuration, as shown in FIGURE 10, comprises two basic components, the legs 10 and the cross members 20. The connection tabs 50 and the connection sockets 40 are preferably supplied preattached to the cross members 20 and legs 10, respectively. In addition, the support arms 32 are preattached to the legs 10. Thus, the only assembly steps required of the consumer or other end user are insertion of the connection tabs 50 of the cross members 20 into the connection sockets 40 of the legs 10. The connection tabs and sockets 50 and 40 are preferably sized such that, when mated, a secure connection is provided that resists inadvertent disconnection while allowing intentional disconnection upon application of a suitable amount of force. Preferably, no tools or other components are required to secure the connection between the cross members 20 and the legs 10.

Three different lengths of cross members 20 are provided, as illustrated in FIGURE 10. The three shortest cross members 23 are sized to extend between the support arms 32 to form the top rack portion 30. The eight middle-length cross members 24 are sized to extend between the inner linkage members 14 of the legs 10. The single longest cross member 22 is sized to extend between the outer linkage members 14 of the legs proximate the upper end of the rack 5 and is the cross member 22 to which the support arms 32 of the upper rack portion 30 are engageable.

The cross members 20, support arms 32, and legs 10 are preferably formed of metal, and are preferably hollow. The various pivot pins and connecting pins are also preferably metal. The connection tabs 50 and connection sockets 40 are preferably formed of plastic. Plastic end caps may also be provided and inserted into exposed hollow ends of the cross members 20, support arms

32, and legs 10. However, other materials can also be used. For example, the cross members 20, support arms 32, and/or legs 10 may be formed of solid wood, solid plastic, or hollow plastic materials.

5 The rack 5 in its expanded position is preferably between about 36 and 48 inches tall, between about 12 and 16 inches wide, and between about 24 and 36 inches long. In its collapsed position or configuration, the rack 5 is preferably between about 3 and 5 inches high, between
10 about 18 and 22 inches wide, and between about 24 and 36 inches long. Each of the linkage members 14 of the legs 10 is preferably between about 16 and 24 inches in length, and more preferably about 20 inches in length. The shortest cross members 23 are preferably between
15 about 24 and 27 inches in length, and are more preferably about 25.5 inches in length. The medium-sized cross members 24 are preferably between about 25 and 28 inches in length, and are more preferably about 26.5 inches in length. The longest cross member 22 is preferably
20 between about 26 and 29 inches in length, and are more preferably about 27.5 inches in length. The cross members 20 preferably have a diameter of between about 0.4 and 0.5 inches. The connection tabs 30 preferably have a diameter of about 0.7 inches, and a thickness of
25 about 0.1 inches. The pockets of the connection sockets 40 are sized to accommodate insertion and removal of the connection tabs 50.

From the foregoing, it will be appreciated that an improved connection for components of a rack are provided
30 providing for simplified assembly by allowing for sequential assembly of components as opposed to simultaneous assembly, reducing the number of assembly steps to be performed by an end user, and allowing for the volume occupied by the components to be minimized,
35 such as during shipping and display on shelves in a

store. The inventions are not limited to the embodiments described hereinabove or to any particular embodiments. Various modifications to the aforementioned construction, component materials, and component dimensions will result
5 in substantially the same inventions. For instance the connections for components described herein are not limited to use on laundry racks, but can be used for the simplified joining of components of other devices and items.

10 The inventions are defined more particularly by the following claims: